

Database : A_Geneseq_16Dec04:*

- 1: geneseqp1980s:*
- 2: geneseqp1990s:*
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- 6: geneseqp2003as:*
- 7: geneseqp2003bs:*
- 8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query		DB	ID	Description
		Match	Length			
1	2619	100.0	514	7	ADG63312	Adg63312 Human IMP
2	2609	99.6	514	7	ADG63349	Adg63349 Human IMP
3	2605	99.5	514	2	AAR05432	Aar05432 Human IMP
4	2605	99.5	514	5	AAE18189	Aae18189 Human wil
5	2605	99.5	514	7	ADG63310	Adg63310 Human wil
6	2605	99.5	514	7	ADJ68634	Adj68634 Human hea
7	2605	99.5	514	8	ADO19228	Ado19228 Human PRO
8	2605	99.5	529	8	ADR66377	Adr66377 Human pro
9	2605	99.5	529	8	ADR66719	Adr66719 Human pro
10	2601	99.3	514	7	ADG63316	Adg63316 Human IMP
11	2601	99.3	514	7	ADG63314	Adg63314 Human IMP
12	2597	99.2	514	7	ADG63318	Adg63318 Human IMP
13	2595	99.1	514	5	AAU10695	Aau10695 Reference
14	2595	99.1	514	5	AAE18186	Aae18186 Human wil
15	2595	99.1	514	8	ADS88152	Ads88152 Human pro
16	2590	98.9	514	7	ADG63320	Adg63320 Human IMP
17	2569	98.1	514	7	ADG63340	Adg63340 Mouse IMP
18	2559	97.7	514	2	AAR05431	Aar05431 Chinese h
19	2555	97.6	514	7	ADG63338	Adg63338 Mouse wil
20	2234	85.3	514	5	AAE18188	Aae18188 Human wil
21	2234	85.3	514	5	ADI17228	Adi17228 Human NOV
22	2234	85.3	563	6	ADA54125	Ada54125 Human pro
23	2229	85.1	514	5	AAE18257	Aae18257 Human typ

AAR05432

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DT 31-AUG-1990 (first entry)

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DR

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PT

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XX

Matches 512; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Db

Db

Db	121	LSPKDRVRDVFEAKARHGFCGIPITDTGRMGSRVLVGIISSRDIDFLKEEEHDCFLEEIMT	180
Qy	181	KREDLVVAPRSITLKEANEILQRSKKGKLPVNEDELVAIIARTDLKKNRDYPLASKDA	240
Db	181	KREDLVVAPRSITLKEANEILQRSKKGKLPVNEDELVAIIARTDLKKNRDYPLASKDA	240
Qy	241	KKQLLCGAAIGTHEDDKYRLDLLAQAGVDVVLDSSQGNSIFQINMIKYIKDKYPNLQVI	300
Db	241	KKQLLCGAAIGTHEDDKYRLDLLAQAGVDVVLDSSQGNSIFQINMIKYIKDKYPNLQVI	300
Qy	301	GGNVVTAAQAKNLIDAGVDALRVGMGSGSICITQEVVLACGRPQATAVYKVYFYARRFGVP	360
Db	301	GGNVVTAAQAKNLIDAGVDALRVGMGSGSICITQEVVLACGRPQATAVYKVSEYARRFGVP	360
Qy	361	VIADGGIQNVGHIKALALGASTVMMGSLLAATTEAPGEYFFSDGIRLKKYRGMGSLDAM	420
Db	361	VIADGGIQNVGHIKALALGASTVMMGSLLAATTEAPGEYFFSDGIRLKKYRGMGSLDAM	420
Qy	421	DKHLSSQNRYFSEADKIKVAQGVSGAVQDKGSIHKFVPYLIAGIQHSCQDIGAKSLTQVR	480
Db	421	DKHLSSQNRYFSEADKIKVAQGVSGAVQDKGSIHKFVPYLIAGIQHSCQDIGAKSLTQVR	480
Qy	481	AMMYSGELKFEKRTSSAQVEGGVHSLHSYEKRLF	514
Db	481	AMMYSGELKFEKRTSSAQVEGGVHSLHSYEKRLF	514

Database : Published_Applications_AA:*

- 1: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
- 2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
- 3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
- 4: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*
- 5: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
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- 11: /cgn2_6/ptodata/2/pubpaa/US09C_PUBCOMB.pep:*
- 12: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
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- 19: /cgn2_6/ptodata/2/pubpaa/US11A_PUBCOMB.pep:*
- 20: /cgn2_6/ptodata/2/pubpaa/US11_NEW_PUB.pep:*
- 21: /cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep:*
- 22: /cgn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Match	Query Length	DB	ID	Description
1	2619	100.0	514	10	US-09-846-637A-4	Sequence 4, Appli
2	2605	99.5	514	9	US-09-853-918-63	Sequence 63, Appl
3	2605	99.5	514	10	US-09-846-637A-2	Sequence 2, Appli
4	2605	99.5	514	16	US-10-408-765A-440	Sequence 440, App
5	2601	99.3	514	10	US-09-846-637A-6	Sequence 6, Appli
6	2601	99.3	514	10	US-09-846-637A-8	Sequence 8, Appli
7	2597	99.2	514	10	US-09-846-637A-10	Sequence 10, Appl
8	2595	99.1	514	9	US-09-853-918-49	Sequence 49, Appl
9	2590	98.9	514	10	US-09-846-637A-12	Sequence 12, Appl

Database : Issued Patents_AA:*

- 1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
- 2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
- 3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
- 4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
- 5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
- 6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result		%					
No.	Score	Query Match	Length	DB	ID	Description	
1	2605	99.5	514	3	US-08-925-230-7	Sequence 7, Appli	
2	2605	99.5	514	4	US-09-712-372-7	Sequence 7, Appli	
3	2595	99.1	514	4	US-09-538-092-913	Sequence 913, App	
4	2595	99.1	607	4	US-09-949-016-11614	Sequence 11614, A	
5	2559	97.7	514	3	US-08-925-230-8	Sequence 8, Appli	
6	2559	97.7	514	4	US-09-712-372-8	Sequence 8, Appli	
7	2222	84.8	514	4	US-09-538-092-973	Sequence 973, App	
8	1607.5	61.4	523	4	US-09-538-092-584	Sequence 584, App	
9	1210.5	46.2	371	3	US-09-212-247C-9	Sequence 9, Appli	
10	906	34.6	510	4	US-09-134-000C-5141	Sequence 5141, Ap	
11	885	33.8	495	4	US-09-107-532A-4081	Sequence 4081, Ap	
12	865	33.0	488	4	US-09-710-279-2308	Sequence 2308, Ap	
13	865	33.0	494	3	US-09-134-001C-5024	Sequence 5024, Ap	
14	862.5	32.9	558	4	US-09-252-991A-18187	Sequence 18187, A	
15	859.5	32.8	497	4	US-09-328-352-6297	Sequence 6297, Ap	
16	819	31.3	510	4	US-09-489-039A-11778	Sequence 11778, A	
17	816	31.2	487	4	US-09-809-665A-169	Sequence 169, App	
18	811	31.0	487	4	US-09-809-665A-24	Sequence 24, Appl	
19	807.5	30.8	492	4	US-09-583-110-4390	Sequence 4390, Ap	

RESULT 1

US-08-925-230-7

; Sequence 7, Application US/08925230

; Patent No. 6147194

; GENERAL INFORMATION:

; APPLICANT: Collart, Frank

; APPLICANT: Huberman, Eliezer

; TITLE OF INVENTION: METHODS AND MATERIALS RELATING TO IMPDH

; TITLE OF INVENTION: AND GMP PRODUCTION

; NUMBER OF SEQUENCES: 8

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Arnold, White & Durkee

; STREET: P.O. Box 4433

; CITY: Houston

; STATE: Texas

; COUNTRY: USA

; ZIP: 77210

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/925,230

; FILING DATE: September 8, 1997

; CLASSIFICATION: 536

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 5,665,583

; FILING DATE: 12-AUG-1988

; ATTORNEY/AGENT INFORMATION:

; NAME: Wilson, Mark B.

; REGISTRATION NUMBER: 37,259

; REFERENCE/DOCKET NUMBER: ARCD:274

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (512) 418-3000

; TELEFAX: (512) 474-7577

; INFORMATION FOR SEQ ID NO: 7:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 514 amino acids

; TYPE: amino acid

; STRANDEDNESS:

; TOPOLOGY: linear

US-08-925-230-7

Query Match 99.5%; Score 2605; DB 3; Length 514;

Best Local Similarity 99.6%; Pred. No. 4.2e-250;

Matches 512; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1 MADYLISGGTSYVPDDGLTAQQLFNCGDGLTYNDFLILPGYIDFTADQVDLTSALTKKIT 60

Db 1 MADYLISGGTSYVPDDGLTAQQLFNCGDGLTYNDFLILPGYIDFTADQVDLTSALTKKIT 60

Qy 61 LKTPLVSSPMDTVTEAGMAIAMALTGGIGFIHHNCTPEFQANEVRKVKKYEQGFITDPVV 120

Db 61 LKTPLVSSPMDTVTEAGMAIAMALTGGIGFIHHNCTPEFQANEVRKVKKYEQGFITDPVV 120

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Db	121		LSPKDRVRDVFEAKARHGFCGIPITDTGRMGSRVGI	180
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Db	181		KREDLVVAPRSITLKEANEILQRSKKGKLPIVNEDELVAIIARTDLKKNRDYPLASKDA	240
Qy	241		KKQLLCGAAIGTHEDDKYRLDLLAQAGVDVVLDSSQGNSIFQINMIKYIKDKYPNLQVI	300
Db	241		KKQLLCGAAIGTHEDDKYRLDLLAQAGVDVVLDSSQGNSIFQINMIKYIKDKYPNLQVI	300
Qy	301		GGNVVTAAQAKNLIDAGVDALRVGMGSGSICITQEV	360
Db	301		GGNVVTAAQAKNLIDAGVDALRVGMGSGSICITQEV	360
Qy	361		VIADGGIQNVGHIAKALALGASTVMMGSLLAATTEAPGEYFFSDGIRLKKYRGMGSLDAM	420
Db	361		VIADGGIQNVGHIAKALALGASTVMMGSLLAATTEAPGEYFFSDGIRLKKYRGMGSLDAM	420
Qy	421		DKHLSSQNRYFSEADKIKVAQGVSGAVQDKGSIHKFVPYLIAGIQHSCQDIGAKSLTQVR	480
Db	421		DKHLSSQNRYFSEADKIKVAQGVSGAVQDKGSIHKFVPYLIAGIQHSCQDIGAKSLTQVR	480
Qy	481		AMMYSGELKFEKRTSSAQVEGGVHSLHSYEKRLF	514
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 1: pir1:*
 2: pir2:*
 3: pir3:*
 4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query		DB	ID	Description
		Match	Length			
1	2595	99.1	514	1	A31997	IMP dehydrogenase
2	2559	97.7	514	1	B31997	IMP dehydrogenase
3	2555	97.6	514	1	JT0565	IMP dehydrogenase
4	2222	84.8	514	1	A35566	IMP dehydrogenase
5	1764.5	67.4	537	1	S41064	IMP dehydrogenase
6	1635.5	62.4	537	1	S59508	IMP dehydrogenase
7	1610.5	61.5	524	1	S50890	IMP dehydrogenase
8	1607.5	61.4	523	1	S59402	IMP dehydrogenase
9	1589.5	60.7	523	1	S48997	IMP dehydrogenase
10	1473.5	56.3	524	1	T40127	IMP dehydrogenase
11	1385.5	52.9	512	1	A55407	IMP dehydrogenase
12	1363.5	52.1	514	1	A38668	IMP dehydrogenase
13	1324.5	50.6	499	1	T32709	IMP dehydrogenase
14	1155	44.1	502	2	F86298	IMP dehydrogenase
15	1106.5	42.2	503	1	JC4999	IMP dehydrogenase
16	1043.5	39.8	403	2	S53477	IMP dehydrogenase
17	966.5	36.9	485	2	G81308	IMP dehydrogenase
18	958	36.6	485	2	D97232	IMP dehydrogenase

RESULT 1

A31997

IMP dehydrogenase (EC 1.1.1.205) II - human

N;Alternate names: inosine 5'-monophosphate dehydrogenase (IMPDH) type II

C;Species: Homo sapiens (man)

C;Date: 21-May-1990 #sequence_revision 22-May-1998 #text_change 09-Jul-2004

C;Accession: I52303; I54184; A92676; B35566; A31997; A94550

R;Glesne, D.A.; Huberman, E.

Biochem. Biophys. Res. Commun. 205, 537-544, 1994

A;Title: Cloning and sequence of the human type II IMP dehydrogenase gene.

A;Reference number: I52303; MUID:95091778; PMID:7999076

A;Accession: I52303

A;Status: translated from GB/EMBL/DDBJ

A;Molecule type: DNA

A;Residues: 1-514 <GLE1>

A;Cross-references: UNIPROT:P12268; GB:L33842; NID:g602457; PIDN:AAA67054.1; PID:g602458

R;Glesne, D.A.; Collart, F.R.; Varkony, T.; Drabkin, H.; Huberman, E.

Genomics 16, 274-277, 1993

A;Title: Chromosomal localization and structure of the human type II IMP dehydrogenase gene.

A;Reference number: I54184; MUID:93252398; PMID:8098009

A;Accession: I54184

A;Status: preliminary; translated from GB/EMBL/DDBJ

A;Molecule type: DNA

A;Residues: 461-514 <GLE2>

A;Cross-references: GB:L08114; NID:g292239; PIDN:AAA36113.1; PID:g292240

R;Collart, F.R.; Huberman, E.

J. Biol. Chem. 263, 15769-15772, 1988

A;Title: Cloning and sequence analysis of the human and Chinese hamster inosine-5'-monophosphate dehydrogenase cDNAs.

A;Reference number: A92676; MUID:89008491; PMID:2902093

A;Accession: A92676

A;Molecule type: mRNA

A;Residues: 1-189, 'RS', 192-514 <COL>

A;Cross-references: GB:J04208; NID:g186391; PIDN:AAA36112.1; PID:g307066

A;Note: submitted to the Protein Sequence Database, November 1989

R;Natsumeda, Y.; Ohno, S.; Kawasaki, H.; Konno, Y.; Weber, G.; Suzuki, K.

J. Biol. Chem. 265, 5292-5295, 1990

A;Title: Two distinct cDNAs for human IMP dehydrogenase.

A;Reference number: A35566; MUID:90203022; PMID:1969416

A;Accession: B35566

A;Status: nucleic acid sequence not shown; not compared with conceptual translation

A;Molecule type: mRNA

A;Residues: 1-514 <NAT>

C;Comment: mRNA for IMP dehydrogenase I (see PIR:A35566) predominated in normal leukocytes, whereas that for IMP dehydrogenase II predominated in ovarian tumor cells.

C;Genetics:

A;Gene: GDB:IMPDH2

A;Cross-references: GDB:128086; OMIM:146691

A;Map position: 3p24.2-3p21.2

A;Introns: 33/2; 49/3; 83/3; 108/3; 177/3; 207/1; 274/1; 304/1; 336/1; 432/2; 480/2; 508/2

C;Function:

A;Description: catalyzes the oxidation of inosine 5'-phosphate by NAD and one molecule of water to xanthosine 5'-phosphate

A;Pathway: purine nucleotide biosynthesis

C;Superfamily: inosine-5'-monophosphate dehydrogenase; CBS homology; IMP dehydrogenase amino-terminal homology; IMP dehydrogenase catalytic homology

C;Keywords: GMP biosynthesis; NAD; oxidoreductase; purine nucleotide biosynthesis

F;30-96/Domain: IMP dehydrogenase amino-terminal homology <IDHN>

F;117-168/Domain: CBS homology <CBS1>

F;184-232/Domain: CBS homology <CBS2>

F;233-476/Domain: IMP dehydrogenase catalytic homology <IDHC>

F;331/Active site: Cys #status predicted

Query Match 99.1%; Score 2595; DB 1; Length 514;
Best Local Similarity 99.2%; Pred. No. 8.7e-159;
Matches 510; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

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Qy     61 LKTPLVSSPMDTVTEAGMAIAMALTGGIGFIHHNCTPEFQANEVRKVKKYEQGFITDPVV 120
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Db     61 LKTPLVSSPMDTVTEAGMAIAMALTGGIGFIHHNCTPEFQANEVRKVKKYEQGFITDPVV 120

Qy    121 LSPKDRVRDVFEAKARHGFCGIPITDTGRMGSRVLGIISSRDIDFLKEEEHDCFLEEIMT 180
      |||
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      |||
Db    181 KREDLVVAPAGITLKEANEILQRSKKGKLPVNEDELVAIIARTDLKKNRDYPLASKDA 240

Qy    241 KKQLLCGAAIGTHEDDKYRLDLLAQAGVDVVLDSSQGNSIFQINMIKYIKDKYPNLQVI 300
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Db    241 KKQLLCGAAIGTHEDDKYRLDLLAQAGVDVVLDSSQGNSIFQINMIKYIKDKYPNLQVI 300

Qy    301 GGNVVTAQAQAKNLIDAGVDALRVGMGSGSICITQEVVLACGRPQATAVYKVVEYARRFGVP 360
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Db    301 GGNVVTAQAQAKNLIDAGVDALRVGMGSGSICITQEVVLACGRPQATAVYKVSEYARRFGVP 360

Qy    361 VIADGGIQNVGHIKALALGASTVMMGSLLAATTEAPGEYFFSDGIRLKKYRGMGSLDAM 420
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Db    361 VIADGGIQNVGHIKALALGASTVMMGSLLAATTEAPGEYFFSDGIRLKKYRGMGSLDAM 420

Qy    421 DKHLSSQNRYFSEADKIKVAQGVSGAVQDKGSIHKFVPLYIAGIQHSCQDIGAKSLTQVR 480
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Db    421 DKHLSSQNRYFSEADKIKVAQGVSGAVQDKGSIHKFVPLYIAGIQHSCQDIGAKSLTQVR 480

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Database : UniProt_03:*
 1: uniprot_sprot:*
 2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result		%					
No.	Score	Query Match	Length	DB	ID	Description	
1	2595	99.1	514	1	IMD2_HUMAN	P12268	homo sapien
2	2561	97.8	514	1	IMD2_MOUSE	P24547	mus musculu
3	2559	97.7	514	1	IMD2_CRIGR	P12269	cricetulus
4	2547	97.3	514	2	Q6P9U9	Q6p9u9	rattus norv
5	2422	92.5	514	2	Q66JD5	Q66jd5	xenopus tro
6	2411	92.1	514	2	Q7ZYP7	Q7zyp7	xenopus lae
7	2404	91.8	514	2	Q7ZXT8	Q7zxt8	xenopus lae
8	2395	91.4	514	2	Q7ZYW9	Q7zyw9	brachydanio
9	2256	86.1	514	2	Q7ZWN1	Q7zwn1	xenopus lae
10	2253	86.0	544	2	Q6GMG5	Q6gmg5	brachydanio
11	2234	85.3	514	1	IMD1_HUMAN	P20839	homo sapien
12	2222	84.8	514	2	Q7TSG7	Q7tsg7	mus musculu
13	2203	84.1	514	1	IMD1_MOUSE	P50096	mus musculu
14	2093.5	79.9	530	2	Q6ZNB1	Q6znb1	homo sapien
15	1830.5	69.9	559	2	Q7QHD0	Q7qhd0	anopheles g
16	1764.5	67.4	537	1	IMDH_DROME	Q07152	drosophila
17	1614.5	61.6	522	2	Q756Z6	Q756z6	ashbya goss
18	1610.5	61.5	524	1	IMD4_YEAST	P50094	saccharomyc
19	1608.5	61.4	526	2	Q6C897	Q6c897	yarrowia li
20	1607.5	61.4	523	1	IMD3_YEAST	P50095	saccharomyc
21	1605.5	61.3	521	1	IMH3_CANAL	O00086	candida alb
22	1597.5	61.0	521	2	Q9P8J2	Q9p8j2	candida alb